



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,198	10/31/2003	Alex Ka Tim Poon	NRCAP019	9979
26541	7590	04/19/2005	EXAMINER	
RITTER, LANG & KAPLAN P.O. BOX 2448 SARATOGA, CA 95070			MILLER, PATRICK L	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/698,198	POON ET AL. <i>PM</i>
	Examiner	Art Unit
	Patrick Miller	2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 January 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 2-4, 13, 16, 17 and 22-30 is/are allowed.
- 6) Claim(s) 1,5-12, 14, 15, 18-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 January 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 01/24/05 have been fully considered but they are not persuasive.
 - The Examiner asserts that the Poon et al. (6,281,655) does disclose an air bearing. See rejection below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1, 5-12, 14, 15, and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Poon et al. (6,281,655).
 - With respect to claims 1, 12, and 14, Poon et al. disclose a stage apparatus comprising: a first stage (Fig. 1, #18), the first stage arranged to define an interior space (Fig. 9, interior of #18); a first actuator that is positioned substantially within the interior space, the first actuator drives the first stage in a first direction (Fig. 9, #36 inside #19 and drives in y direction), and an air bearing arrangement that enables the first stage to be driven in the first direction substantially without friction (cols. 9/10, ll. 62-67/1-15).
 - With respect to claim 5, the first actuator drives the first stage through a center of gravity associated with the first stage (Fig. 9, #128 includes the center of gravity for the first stage).

- With respect to claims 6, 12, and 14, Poon et al. disclose a second stage assembly, including a second stage and a second actuator (Fig. 4, #34), the second stage assembly is supported by the first stage assembly (Fig. 9, first stage supports the second stage via #'s 130 and 148), and the second actuator drives the second stage in a second direction (col. 9, lines 38-39; moves in the x direction).
- With respect to claim 7, an interface plate is coupled to the first and second stage assemblies (Fig. 9, #130 supports second assembly along with #148).
- With respect to claims 8 and 15, the first stage is a coarse stage and the second stage is a fine stage, with the fine stage supporting the object to be scanned (col. 3, lines 45-67).
- With respect to claims 9-11, 18, 20, and 21, Poon et al. disclose the stage apparatus used with an exposure apparatus, and a wafer or device is manufactured using the exposure apparatus (col. 3, lines 52-60).
- With respect to claim 19, Poon et al. disclose using the exposure apparatus with an extreme ultraviolet lithography system (col. 15, lines 3-36).

Allowable Subject Matter

3. Claims 2, 13, 16, 17, and 22-30 would be allowed once the minor informalities are corrected.
4. The following is a statement of reasons for the indication of allowable subject matter:
 - With respect to claim 2, the Prior Art does not disclose a counter mass arrangement that is within the interior space of the first stage and coupled to the first actuator, and with the additional limitations of claim 2.
 - With respect to claim 13, the Prior Art does not disclose first and second stage assemblies as disclosed and the first stage assembly includes a counter mass arrangement, wherein

Art Unit: 2837

the counter mass arrangement is arranged within the interior space of the first actuator and coupled to the first actuator.

- With respect to claims 16 and 17, the Prior Art does not disclose a stage device where the second stage is arranged within a vacuum environment and the first actuator is arranged within a non-vacuum environment, and the additional limitations of claim 16.
- With respect to claims 22-30, the Prior Art does not disclose an apparatus with first and second stage assemblies, where the first stage has an interior section and a first actuator is arranged within the interior section, and the first actuator is substantially unexposed to a vacuum environment; and the second stage is arranged within a vacuum chamber and exposed to the vacuum environment.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

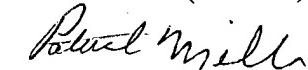
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Miller whose telephone number is 571-272-2070. The examiner can normally be reached on M-F, 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 41. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick Miller
Examiner
Art Unit 2837

pm
April 17, 2005



DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800